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Gratitude Journaling as Intervention to Combat Nurse Burnout in
Cardiac Surgery Intensive Care Nurses

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A thesis submitted to the faculty of
Gardner-Webb University Hunt School of Nursing
in partial fulfillment of the requirements for the
Master of Science in Nursing Degree

Boiling Springs, North Carolina

2020

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Abstract

As a practicing registered nurse in the intensive care setting, this researcher witnessed an episode of burnout characterized by a public meltdown, crying, and yelling. This sparked an interest in an intervention to combat nurse burnout. Literature was found on gratitude which has been found to increase resiliency. An increase in resiliency, in various populations, has been found to decrease perceived stress and feelings of burnout. This researcher investigated the use of gratitude journaling for 21 days as means to decrease perceived stress and feelings of burnout while increasing gratitude and resiliency. The PSS, GQ, BRS, & BBI tools were utilized in the pre and post-intervention survey. The data collected was compared using a paired t-test analysis. The data analysis found the decrease in mean perceived stress scores and increased mean resiliency scores were statistically significant. Although, both the gratitude scores and burnout scores improved from the baseline data, the changes were not statistically significant. The sample was used from one hospital in the southeastern United States on one hospital unit. A total of 20 participants completed the baseline survey completely and of those participants, 11 completed the gratitude journaling intervention and post-intervention survey. Due to the small sample size and high attrition rates, this study will need to be repeated on a larger scale to establish reliability and validity.

Keywords: nurse burnout, burnout, stress, resilience, gratitude

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CHAPTER I

Introduction

Stress is defined as a normal body reaction when changes occur. This reaction can be physical, mental, or emotional (Cleveland Clinic, 2019). According to the American Institute of Stress (2019), 40% of American workers report their job as very or extremely stressful while 26% of workers feel burned out often or very often. The American Psychological Association (2019a) reports healthy levels of stress, known as eustress, provide motivation while chronic exposure to stress can be detrimental to one's health resulting in distress (American Institute of Stress, 2019).

Nursing is a dynamic, multidimensional profession functioning within an increasingly complex and demanding healthcare field resulting in various levels of stress (Chen & Chen, 2018; American Institute of Stress, 2019). According to Chen and Chen (2018), stress related to the high professional demands, low autonomy, poor social support, and lack of feedback in nursing lead to burnout. The term burnout was first coined in 1974 by Freudenberger to describe the response of those exposed to chronic stress when working in direct contact with people (Jennings, 2008). Intensive care unit (ICU) staff nurses often experience and witness symptoms of burnout including cynicism, irritability, exhaustion, and even public meltdowns (Mayo Clinic, 2018). Concilio et al. (2019) report nurse burnout as a factor in staffing shortages and an increased rate of nurse turnover. Staffing shortages and the increased rate of nursing turnover results in increased stress caused by less available time for patient care, patient education, and documentation/charting. Merriam-Webster (2019a) defines burnout as a time in which one is depleted of physical strength, motivation, and emotional fortitude due to prolonged

exposure to stress. According to the Mayo Clinic (2018), being in a state of burnout leads to depersonalization and decreased feelings of accomplishment. The Joint Commission (2019) reported a survey conducted in April of 2019 with over 2,000 nurse participants and of these nurses, over 15% of reported feeling burnout.

Significance

In the United States there are over three million registered nurses (RNs) making registered nurses the largest portion of the healthcare field (Wei et al., 2018; Buerhaus et al., 2017). Despite this large number, the nursing shortage remains a major concern. One factor is the aging baby boomers which comprise over one million nurses who will reach retirement age by 2030. This is compounded by the large number of novice nurses joining the field age 35 and up with less years to work compared to the younger generations, and the number of nurses leaving the profession for non-nursing positions (Buerhaus et al., 2017). The U.S. Bureau of Labor Statistics (2015) projected 1.1 million registered nurse job openings by 2024 with nearly 650,000 of those being from replacement needs which does not take into account the number of nurses reaching retirement age in 2030 projected by Buerhaus et al. (2017). These statistics reinforce the importance of preserving and strengthening the current nursing workforce.

The impact of this nursing shortage has caused an increased level of stress on nurses which is a major variable in the prevalence of nurse burnout (Buerhaus et al., 2017). The American Institute of Stress (2019) reports chronic exposure to stress, such as the chronic work stress experienced by nurses in today's healthcare system day after day, can lead to physiological and psychological disfunction. The symptoms of chronic stress exposure can include depression, insomnia, headaches, stomach ulcers,

hypertension, and hyperglycemia (American Institute of Stress, 2019). Distress is a maladaptive state resulting from the body's coping mechanisms failing to maintain homeostasis with negative implications such as work problems and feelings of negativity (National Research Council Committee on Recognition and Alleviation of Distress in Laboratory Animals, 2008; American Institute of Stress, 2019). The chronic stressors nurses experience includes: staffing shortages, increased demands, exposure to death and dying, an increasingly complex work environment, increasingly complex critical patients, and unfavorable nurse to patient ratios which can lead to burnout characterized by depersonalization or feelings of emptiness, emotional exhaustion, and job dissatisfaction (Lee et al., 2016; World Health Organization, 2019; Chen & Chen, 2018). The U. S. Centers for Disease Control and Prevention [CDC] report 3.3% of nurses left their job with no plans to return to nursing largely due to these chronic stressors and feelings of burnout.

Sarafis et al. (2016) identified the profession of nursing “as a strenuous job with complicated demands” (p. 1). Critical care nurses are identified by Torpey (2016), with the U. S. Bureau of Labor Statistics, as a high-intensity career requiring adaptability, performance under stressful circumstances and perseverance. Aiken et al. (2012) surveyed over 26,000 bedside registered nurses in the United States of which 34% reported feelings of burnout. Some nurses have a natural ability to perform well under stress, adapt, and be resilient, while others must learn this skill. Resilience is the ability to adapt well when challenged with adversity or bounce back when misfortune occurs (Wei et al., 2018; Merriam-Webster, 2019b). Jackson et al. (2018) stated anyone can increase their resilience because one's resilience level is not connected to social stature or

demographic location. The American Psychological Association (2019b) state having an optimistic outlook regarding the positive aspects of one's life and journaling are methods to increase resilience which has been found to be a key element in the battle against burnout (Concilio et al., 2019).

Purpose

The purpose of this MSN thesis was to explore an intervention to combat nurse burnout. Nurse burnout is a prevalent occurrence in the acute care settings around the world regardless of race, culture, or ethnicity resulting from chronic exposure to a stressful work environment, job dissatisfaction, lack of autonomy, and emotional exhaustion (Chen & Chen, 2018). Resiliency, a proven weapon in the battle against burnout, which is an inherent or a learned skill, can be increased through self-care, coping strategies, and mindfulness (Chaukos et al., 2017, Rushton et al., 2015; Wei et al., 2018). Gratitude is a positive emotion negating negative emotions, allowing focus on the positive aspects of one's life while increasing resiliency (American Psychological Association, 2019b). This researcher focused on the use of gratitude journaling to increase resiliency and reduce perceived stress and burnout in cardiac surgery intensive care nurses.

Theoretical Framework

Central to Parse's theory of humanbecoming is the humanuniverse which is indivisible, unpredictable, and everchanging cocreation of the nurse and the environment. The three principles of the Humanbecoming paradigm describe the humanuniverse and are described in Table 1. The paradoxes of the Humanbecoming paradigm are not to be thought of as problems, needs, solutions, or opposites. Theses paradoxes are rhythms of

life, a constant flow forming the interaction, the perception of the interaction, and the enabling-limiting choosing of the all at once (Parse, 2015).

Table 1

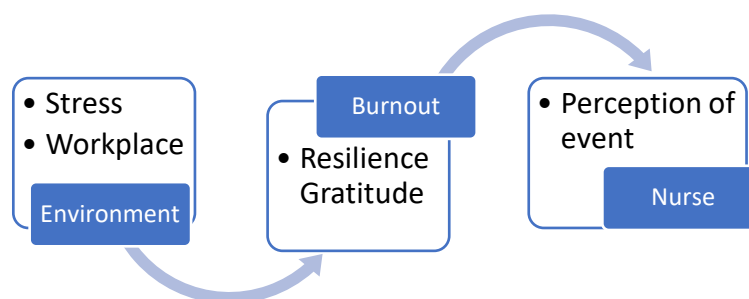
Principles of the Humanbecoming Paradigm

1 st Principle	2 nd Principle	3 rd Principle
Humans create their own realities within the seamless, everchanging, and illimitable humanuniverse.	Throughout the rhythmical humanuniverse, there is a constant choosing of revealing-concealing all at once.	Humans are ever changing, moving on with possibilities of the pushing-resisting, certainty-uncertainty, in the being-nonbeing all at once of the visible-invisible now.

The environment is in constant interaction with the nurse. Each nurse perceives each interaction differently as no two interactions will be the same. Both the environment and the nurse are constantly choosing connecting-separating, disclosing-not disclosing, visible-invisible of the emerging now. The nurse's resiliency, whether learned or innate, effects the nurse's perception of the interaction. Gratitude-cynicism (not an official paradox), is a potentiating-restricting all at once rhythm in the humanuniverse. The researcher hypothesized retraining-training (not an official paradox) the mind to default to gratitude over cynicism, will decrease the nurse's perception of stress and burnout from the constant interaction with the environment (Parse, 2015).

Figure 1

Conceptual-Theoretical-Empirical (CTE) Diagram



Hypothesis

Through daily gratitude journaling, the nurse will have a decreased perception of stress while experiencing an increased perception of gratitude and resilience leading to a decreased feeling of burnout.

Definition of Terms

Stress is event consisting of a stimulus causing a reaction in the brain, that then activates a physiologic response (Dhabhar, 2014). Burnout is a syndrome characterized by emotional exhaustion, detachment, and cynicism leading to poor performance and a non-caring attitude (Chaukos et al., 2017; Concilio et al., 2019; Jackson et al., 2018). Resiliency is the ability to bounce back characterized by effective coping, persistence, and adaptability (Ledesma, 2014). Gratitude can be considered a state, emotion, or trait and is characterized by thankfulness, gratefulness, and appreciativeness (Schache et al., 2019; Stegen & Wankier, 2018).

Nurse burnout is a worldwide epidemic and plagues the strained healthcare system in the United States (Lee et al., 2016). Resilience, either naturally possessed or a learned skill, is key to both the nurse's survival and ability to thrive in the stress filled environment of the healthcare field (Wei et al., 2018). Gratitude allows people to

connect to something outside of themselves which can be cultivated through use of reflective journaling (Fournier & Sheehan, 2015). Use of gratitude in the form of daily journaling as an intervention was tested to increase the resiliency of nurses in the cardiac surgery intensive care unit setting.

CHAPTER II

Literature Review

The value-based reimbursement system of the healthcare industry in the United States is heavily reliant upon many nursing impacted indicators of quality care. The stressful and increasingly complex environment nurses must function within is complicated by the continually worsening nursing shortage (Brown et al., 2018). Nurse burnout impacts the quality of care delivered, patient perception of care, and increases the likelihood of negative patient outcomes (Wei et al., 2018; Lee et al., 2016). Resiliency has been found to be a common trait among those who thrive in stressful situations (Wei et al., 2018). Resiliency can be strengthened and grown through intervention such as coping mechanisms, self-care, and gratitude (Rushton et al., 2015). This researcher explored the use of gratitude journaling as an intervention to increase resiliency in a convenience sample of cardiac surgery intensive care unit nurses.

Review of Literature

The MSN thesis began with the researcher's observation and curiosity regarding nurse burnout which led to a search regarding interventions to decrease the prevalence of burnout in cardiac surgery intensive care nurses. This researcher utilized the Gardner-Webb University library online Bulldog OneSearch beginning with burnout, which lead to the following key word searches: burnout AND nurse, burnout AND resilience, nurse burnout, how to increase resilience, increase resilience, resiliency AND gratitude, Robert Emmons, stress, types of stress, nurse AND stress, journaling AND resiliency, gratitude journal, and gratitude journal AND nurse.

Stress and Burnout

The environment in which nurses must work is strenuous with increasing various complicated demands. The occupational stress of the increasing demands and responsibilities compounded by staffing shortages and turnover rates are major factors contributing to nurse burnout. The study by Sarafis et al. (2016), explored the impact of occupational stress on nurses caring behaviors and quality of life. Of the 300 surveys, 246 were returned. The study found more occupational stress was associated with poorer physical and mental health. These stressors included conflicts with peers and/or supervisors, workload, or discrimination. The study also found those who desired to leave the nursing field reported suffering from more physical symptoms. Although this study did not reproduce a negative correlation between nursing caring behaviors and occupational stressors, the researchers did reproduce a negative correlation between stressors and nurses mental and physical health. Limitations of study were the variability of qualifications between the participants. The study was conducted in Greece, which has the third lowest ratio of nurses to population in Organization of Economic Co-operation and Development (OECD) countries. Of the participants, 54.9% were nursing assistants.

The chronic exposure of nurses to stressors in the high demanding work environment of the healthcare industry is a major factor in the occurrence of burnout (Lee et al., 2019). Lee et al. (2019) argued this was in part due to the nature of the job stating “Emotional workers are not allowed to express their actual emotions during work but are required to control or adapt their behaviors” (p. 686). Lee et al. (2019) conducted a study using a convenient sample and a cross sectional survey design. The researchers

hypothesized that stress and resiliency had a direct effect on burnout and the presence of resilience mitigated the effect of stress on burnout. The researchers surveyed 403 call center workers, 270 mental health workers, and 133 school counselors. Of the 270 mental health workers, 36% were nurses, 57% social workers, and 8% clinical counselors. The researchers used the 10-item Perceived Stress Scale, the Connor-Davidson Resilience Scale, and the Maslach Burnout Inventory-General Survey. The study found a positive relationship between stress and burnout while a negative relationship was found between resilience and burnout. The study was limited as 90% of the participants were women, limiting the generality of the results. The study also did not address the environmental factors effecting burnout.

Burnout

Work Stress and Burnout Among Nurses: Role of the Work Environment and Working Conditions by B. Jennings (2008), chapter 26 in *Patient Safety and Quality: An Evidence-Based Handbook for Nurses* is a comprehensive review of literature and research regarding the variables associated with nurse burnout. The variables identified in the chapter include: stress, gender/family obligations, personal characteristics, work relationships, and management styles. Research regarding interventions to mitigate burnout are increasing social support and increasing empowerment. The evidence presented, according to Jennings (2008), led to the following conclusions. The data suggests a negative relationship between nurse burnout and job satisfaction. More data is required to determine the relationship between nurse burnout and patient outcomes due to inconsistent data. Further investigation is required to determine the practice implications regarding the effects of work stress and shift length on nursing. Evidence suggests a

positive relationship between use of empowerment & social support in decreasing stress as a means to decrease the prevalence of nurse burnout. Nurse managers and managerial strategies are linked to nurse burnout and stress. Jennings (2008) states, “Just as institutional leaders need to understand their financial standing, they also need to assess how environmental stress is affecting patients and staff and take action to alter unhealthy situations” (p. 142).

Burnout is an issue effecting nursing worldwide with a higher prevalence compared to other healthcare related professions (Lee et al., 2016). Aiken et al. (2012) hypothesized that hospitals with better staffing and working environments for nurses would have better patient outcomes and lower intent for nurses to leave the facility. The authors conducted a large cross-sectional study in 13 countries including 1,105 hospitals. The study had 61,168 bedside nurse participants and 130,000 patient participants. The surveys addressed the work environment for nurses, nurse burnout, patient safety, and patient satisfaction. Aiken et al. (2012) found lower nurse to patient staffing ratios in the United States than all other countries surveyed. The study also found 34% of nurses surveyed in the United States reported feeling burnout, 25% were dissatisfied with their job, and 14% intended to leave their job within 1 year. The researchers found a negative correlation between burnout, dissatisfaction, and intention to leave with work environment and decreased nurse workloads. Patients were found to report increased satisfaction with hospitals having lower levels of nurse burnout, low job dissatisfaction, and reported confidence in nursing management. The study was limited by the skewed data regarding nurse to patient ratio in the United States by being the only country to include bedside nurses outside of medical surgical units. The study was also limited by

language differences as translation was required for some countries. The study also could not link the patients with individual nurses, only linking the patients to the hospitals.

The nursing shortage is complicated by the aging patient population and aging nursing profession with an estimated one third of the nursing workforce set to retire by 2030 (Buerhaus et al., 2017). Examining the stressors leading to the phenomenon of burnout and the consequences may aide in the retention of the nursing workforce in the acute care setting as a means of combating the threat of the worsening nursing shortage (Chen & Chen, 2018). Chen and Chen (2018) explored both the antecedents and consequences of nurse burnout in a quantitative method consisting of surveys with a Likert scale. A cross sectional sample of nurses in a large hospital in Southern Taiwan with 807 out of 992 responses. The researchers do not specify if the sample of nurses was random or convenient. Chen and Chen (2018) found an increase occurrence in burnout is related to increased workloads, increased emotional demand, increased occurrence of role conflict, decreased autonomy, and decreased perception of organization and social support. The authors also found an increased rate of job dissatisfaction and turnover related to increased prevalence of burnout. The study found both emotional intelligence and organizational leadership/management as antecedents playing a significant role in decreasing the perception of burnout. Chen and Chen (2018) defined emotional intelligence “as the ability to accurately perceive, appraise, and express emotion” (p. 780). Despite the large sample size of 807 participants, this study was limited as it did not address the phenomenon of burnout over time and did not include nurses from different cultural backgrounds.

Nurse burnout is negatively affecting the nursing shortage globally with as many as 5% of the of the nurses who leave their positions related to burnout, leave the profession of nursing altogether (Rushton et al., 2015). Lee et al. (2016) stated, “nurse burnout is a critical issue worldwide” making intervention strategies to combat the occurrence of burnout crucial (p. 100). In the meta-analysis study by Lee et al. (2016), seven studies were included: five randomized control trials and two quasi-experimental studies from Canada, Turkey, United States, Spain, and the Netherlands. The sample size totaled 1,521 participants over a time span of up to 4 years in the analysis. The individual sample sizes ranged from 30-376 participants. The studies were published between 1999-2014 with all studies utilizing the Maslach burnout inventory-human services survey tool. Only one study covered a time period of 4 years. The coping mechanisms addressed in this study were resilience, hope, self-efficacy, and coping. The study found emotional exhaustion increased over time in the control group while each post intervention score was lower than the pretest in the experimental group. Depersonalization was found to increase post intervention in only one study in the posttest phase and one study at the 6-month phase; however, only one study at the posttest phase, one study at the 6-month phase, and one study at the 1-year phase found a significant different between the control group and intervention group. The personal accomplishment aspect consistent of positive results in all intervention groups. This meta-analysis study concluded coping strategies decrease the prevalence of nurse burnout. The analysis consisted of a limited number of studies (seven studies) with only one following the participants for 4 years. The authors reported the method of randomization was not described in most of the studies.

Nurse burnout is a worldwide issue effecting nursing and patients around the world. Factors effecting burnout include emotional exhaustion, decreased feelings of autonomy, depersonalization, and lack of resources (Chen & Chen, 2018; Nastasa & Farcas, 2015). King and Bradley (2019) investigated the role of burnout related to the retention of nurses. The researchers utilized 37 hospitals across the United States, having 1,923 registered nurses participate in the study. Surveys were administered in a cross-sectional study and consisted of 34 questions. The survey measured engagement, burnout, retention, and nurse quality indicators. Of those surveyed, 85.6% were either fully engaged or engaged and 14.4% unengaged. The study then differentiated engagement related to generation, shift (night vs day), and educational level. The study found 15.6 % of nurses reported feeling burnout with 41% of unengaged nurses reported feelings of burnout. Only 1.6% of fully engaged nurses and 5.3% of engaged nurses reported plans to leave their hospital within the next 2 years compared to 20.7% of unengaged nurses planning to leave within the next 2 years. The authors recommend facilities to develop action plans to address engagement and burnout as a means of increasing retention and quality patient care. This study was limited due to the Nurse Quality Assessment Inventory (NQAI), as it was developed by PRC Custom Research (2019), the employer of the authors, and no data ensuring the validity or reliability of the tool is stated.

Burnout & Intensive Care Nurses

Nurses within an intensive care unit setting are exposed to a high stress and complex work environment. Mealer et al. (2012) stated the stressful work environment of the ICU placed nurses at an increased risk of burnout, a major factor in the turnover rate contributing to the nursing shortage. The purpose of the study by Mealer et al.

(2012) was the creation of a cognitive behavioral therapy to increase resiliency and prevent the development of post-traumatic stress disorder (PTSD) in future ICU nurses. The study in the article is the follow-up from a previous study consisting of 744 nationally surveyed ICU nurses. From this survey, 324 participants indicated on the survey a willingness to participate in a telephone interview. The participants were divided into two groups: the highly resilient nurses who had worked in the ICU setting for at least 5 years and the nurses who had a positive score on the post traumatic diagnostic scale indicating PTSD no matter how much experience. The interview was conducted using open-ended questions, lasting 45-90 minutes. According to the researchers, thematic saturation occurred after 27 interviews, 13 highly resilient nurses, and 14 nurses with PTSD. The study identified four domains from the data: worldview, social network, cognitive flexibility, and self-care/balance. Highly resilient nurses possess a worldview of acceptance of death as part of life and patient outcomes are out of their control. In comparison, nurses with PTSD have a worldview of regret related to nursing outcomes and did not have the ability to get past negative experiences. The highly resilient nurses reported positive social networks both personally and professionally. The nurses with PTSD reported personal networks with little or no support and a confrontational work environment. Highly resilient nurses were able to adapt responses and behaviors depending on the situation demonstrating cognitive flexibility through use of emotional intelligence, optimism, and reflection. These highly resilient nurses tend to use trauma as a learning experience in comparison to nurses with PTSD who tended to avoid reminders of the traumatic experiences. The highly resilient nurses in the study reported having a life outside work with various physical activities.

The highly resilient ICU nurses used positive coping skills preventing the occurrence of PTSD. The study was limited by use of a convenience sample. Attributes shared by those who volunteered may have affected the findings.

Resilience

Burnout is a worldwide phenomenon effecting nursing and is a significant preceding factor to turnover rates and the nursing shortage (Lee et al., 2016). Resilience and burnout go hand in hand as they are part of the same process along a continuum (Jackson et al., 2018). Resilience is the ability of an individual to adapt in the face of adversity in a positive manner. The study by Jackson et al. (2018) began with the sole focus of resiliency in critical care nurses, but found resiliency and burnout were linked and then broadened the study. A convenience sample of critical care nurses from a large teaching hospital in Canada was utilized in this study. The 11 participants volunteered to be part of the study. Each participant was interviewed in person for 60-90 minutes using open ended questions. The study found workplace adversity to be unavoidable. If the participants were aware of the exposure to adversity and the impact of this exposure, the participant could then move onto managing the exposure. The researchers identify four domains in which management of exposure occurs: protecting, processing, decontaminating, and distancing. Protecting involves the building of protective barriers such as depersonalization or humor. Processing frequently involved venting or confiding in another nurse who could understand the context of the situation. Decontaminating is the process of moving past the adversity and helping to create a work-life balance through physical activity, supportive relationships, or artistic activities. Distancing is physically moving away from the site of workplace adversity such as use of the

breakroom for venting or taking vacation time. The researchers reported the indicators in the theory of managing exposure were a spectrum reflecting thriving, resilience, survival, and burnout. The researchers concluded resilience and burnout were not different processes, but were occurrences along one spectrum. The study was limited by use of one unit in one hospital and the small sample size of those who volunteered to participate, who may have similar attributes and experiences. The researchers referred to the sample pool as homogenous.

The increased workload, the growing complex needs of the patient population, and the aging baby boomer population add strain to already intense and stressful work environment for nurses. It is because these challenging circumstances will not decrease in prevalence that nurses must be able to protect themselves from the high-stress situations causing moral distress and resulting in burnout (Rushton et al., 2015). In the published phase I of the study by Rushton et al. (2015), the relationship between moral distress, emotional exhaustion, burnout, hope, and resilience was investigated. The study surveyed 114 nurses from four different hospitals within one hospital system. These nurses were employed in high-stress units: pediatrics, oncology, and adult critical care. Six different survey instruments were utilized in this cross-sectional survey method. The researcher did not specify a timeframe for phase II of the study however, an education intervention was performed prior to moving into phase II in an attempt to increase resilience and increase nurse retention. The study found when increased resilience was self-reported, the perception of burnout, emotional exhaustion, and depersonalization was decreased in contrast to a positive relationship between resilience and perception of personal accomplishment. The researcher's findings suggested emotional exhaustion

may be a forecasting element in the incidence of burnout. Rushton et al. (2015) stated interventions aimed to increase coping abilities and resilience may reduce the occurrence of burnout. This study was a preliminary, cross sectional survey resulted analysis and did not encompass results from phase II of the study. The study was also from one geographic area using one hospital system which may have affected the variability of results with the limitation of units within that health system to only those considered high-intensity by the authors.

Staffing shortages and an increase in the aging population, complicated by compounding chronic illnesses, and an aging workforce are a few of the stressor's nurses encounter in today's healthcare field. Chronic exposure to these stressors leads to nurse burnout which in turn worsens the staffing shortages by increasing the turnover rate (Concilio et al., 2019). Nurse burnout causes emotional exhaustion, decreased performance, and cynicism which results in an increased use of physical restraints, increased frequency of patient falls, and an increase in the prevalence of pressure ulcers (Aiken et al., 2014 & Robert Wood Johnson Foundation, 2012 as cited in Concilio et al., 2019). Concilio et al. (2019) used an integrative review of literature consisting of 16 articles using an integrative approach constructed by Whittemore and Knafl (2005, as cited in Concilio, et al., 2019). The researchers sought to find variables associated with newly licensed nurse lack of resiliency, protective factors increasing resiliency, and interventions increasing resiliency. The integrative literature review found lack of resiliency was positively associated with turnover and decreased job satisfaction. The researchers found use of nurse residency programs increased resiliency as evidenced by social support, effective preceptors, and organizational support. Nurse residency

programs also decreased the rate of turnover in newly licensed nurses. Concilio et al. (2019) found when newly licensed nurses experience incivility and verbal abuse from providers and other staff, resiliency decreased. Outcomes found to be associated with increased resilience were increased empathy, organizational engagement, and improved critical thinking skills. The most common outcome associated with decreased resiliency was an increase in nurse turnover. The authors reported limitation of racial diversity, male representation, and use of various practice settings as each unit orients nurses differently.

In 2017, the turnover rate in the United States in acute care was as high as 30.7% according to Nursing Solutions, Inc. (2008, as cited in Wei et al., 2018). Burnout plays a major role in the turnover rate (Brown et al., 2018). Nurse leaders have a duty to coach, guide, and educate nurses on the importance of self-care and techniques to build resilience to combat nurse burnout (Kester & Wei, 2018). The focus of the study in Wei et al. (2018) was to identify strategies nurse leaders utilized to increase resiliency in nurses. This was a qualitative study focusing on the subjective description of experiences cultivating resilience in the staff. The study took place in a hospital system on the east coast of the United States with 20 participants. The researchers reported the sample size provided information saturation. Data was collected using a demographic form and an in-person interview lasting 45-75 minutes. The study revealed seven strategies to increase resilience: facilitate social connections, promoting positivity, capitalizing on each nurse's strengths, nurturing nurses' growth, encouraging self-care, fostering mindfulness, and showing altruism. The researchers reported an effective intervention in promoting positivity was the use of gratitude. One nurse manager instituted starting each

shift with statements of gratitude. The nurse manager reported increased positivity in the behaviors of the staff members of the unit and an increase in Hospital Consumer Assessment of Healthcare Providers and Systems (HCAHPS) scores. The authors concluded the role of the nurse leader is instrumental in creating a culture of resilience which will decrease burnout and increase positive patient outcomes. The researchers did not specifically address the study limitations in the article. The study was limited by use of one hospital system. Another limitation was the use of only one consistent question throughout the interview process (Wei et al., 2018).

Emotional Intelligence

The prevalence of nurse burnout or burnout syndrome is a worldwide issue of significance affecting those whose work puts them in constant contact with people (Nastasa & Farcas, 2015). The three million nurses in the United States, as frontline healthcare employees, play a key role in the delivery of quality care and hospital reimbursement in the value based system created by the Affordable Care Act (Buerhaus et al., 2017; Chen & Chen, 2018). In a study by Nastasa and Farcas (2015), the effect of emotional intelligence in nurses and doctors was investigated. In an undisclosed medical system in Romania, 120 doctors and nurses between the ages of 26-52, were asked to complete two individual psychological tests: one measuring emotional intelligence and the other focusing on the components of burnout and the perception of burnout. The study was completed in a cross-sectional survey method. The data was quantified using a Likert scale. Nastasa and Farcas (2015) found an increased perception of emotional intelligence was negatively related to a perception of incompetence or inability to achieve goals. Women in the study scored significantly higher in emotional exhaustion in

comparison with men scoring higher in depersonalization. The researchers reported a significant positive correlation between emotional intelligence and perceived personal accomplishment. Nastasa and Farcas (2015) found their research supported implementation of resiliency development programs for healthcare professionals as a means of increasing emotional intelligence. Although this study used a relatively small, likely convenience sample of healthcare employees, both physicians and nurses, the findings were consistent with other studies. The use of two different psychological tests created a mixed methods approach and complicated the data analysis process. Professional differences in physicians and nurses and gender differences resulted in variation in the tested variables.

Emotional intelligence is one's ability to process their emotions, involving acknowledging the emotion, controlling the emotion, and being able to process the emotion (Psychology Today, 2019). This skill is a necessity in the high stress and high stakes environment in which critical care nurses must function. Geng (2018) explored the connection between gratitude and emotional intelligence as those who exhibit higher levels of gratitude tend to be less pessimistic and more optimistic. Geng (2018) believed gratitude "provides resilient protection" from negative stressors (p.1384). The researcher hypothesized emotional intelligence was positively related to gratitude and gratitude was positively related to the effect of emotional intelligence on subjective well-being. The study consisted of 365 undergraduate students from two universities in Beijing who were randomly selected by their student ID number. All participants returned their questionnaires. The instruments utilized were an emotional intelligence scale, a gratitude questionnaire, and a subjective well-being scale. The study found emotional intelligence

had a significant positive relationship with gratitude. The researcher also found both emotional intelligence and gratitude to be positively correlated with life satisfaction and positive affect. The study did not specify the major of the undergraduate participants and was performed in China. The study did find gratitude was a mediating influence on emotional intelligence which in turn led to increased subjective well-being (Geng, 2018).

Gratitude

Optimism and gratitude are positive psychological constructs with protective properties found in resilient individuals (Millstein et al., 2016; Mealer et al., 2012). These protective properties are vital in cultivating a culture of highly resilient nurses in the fight against nurse burnout. Millstein et al. (2016) studied the effect of optimism and gratitude on mental health and physical well-being in acute coronary syndrome patients 2 weeks after discharge and again at 6 months after discharge. Gratitude was found to be negatively related to stress and fatigue, but positively correlated with increased mood, sleep, self-efficacy, and physical health. Of the 164 participants, 156 completed all self-assessment questionnaires. The diversity of the participants was limited as the majority of the participants were white males congruent with the population having acute coronary syndrome.

Nurses, especially critical care nurses, function in high intensity environments often involving hypervigilance and chronic exposure to death and dying. Use of gratitude as a healing intervention after an emotionally straining event is explored in a case study by Emmons and Stern (2013). In this case study, Susanna is affected by multiple traumatic events in a period of only a few weeks. These traumas included her husband being comatose after a motorcycle accident, adultery, gambling, and learning all her

family's savings had been depleted due to the gambling. The researchers stated the use of effective listening and reflecting was utilized, allowing natural emergence of Susanna's learned culture of gratitude. Emmons and Stern (2013) referred to Susanna's childhood cultivation of gratitude as currency. The researchers stated attention was necessary in the development of gratitude which was achieved through becoming aware of the blessings in one's life and acknowledging the external sources of these blessings. The researchers believed maturation of gratitude blocks the negative feeling of entitlement and victimization. Emmons and Stern (2013) stated journaling was more effective in development of gratitude opposed to simply thinking the thoughts. Journaling allows the writer to organize their thoughts while constructing meaning with a foundation of gratitude. The weaknesses of this research was the limited number of cases studied which limited the generality of the study.

Gratitude Journaling

The concept of gratitude, a factor in perceived happiness, is a positive emotion which aides in increasing emotional resilience (Appel et al., 2013). Emotional resilience is a protective factor against nurse burnout and necessary to combat the emotional toll bedside nursing entails. According to Appel et al. (2013), nurses carry the emotional burden of the illness and recovery process alongside the patient while also balancing the emotionally straining burden of managing patient care and interactions among members of the interdisciplinary team and peers. Appel et al. (2013) conducted a single blind study with 91 bedside medical surgical nurse participants with the purpose of evaluating the use of journaling on perceived happiness and gratitude. The intervention group was asked to read an assigned book about happiness and then journal each day including three

good things that happened that day at the end of each entry. The control group was given a book of similar value then asked to journal each day. The intervention group was required to check in with the researchers weekly while control group was not required to check in during the 4-week intervention period. At the conclusion of the intervention, both groups repeated the surveys with the addition of two open ended questions. The results of the surveys did not produce any significant changes pre-versus-post intervention however, multiple limitations were noted by the researchers. These limitations included a significant change in the working environment on one of the units within the control group. On this unit, multiple open positions, which had previously been occupied by people who created turmoil within the unit, were now filled with new hires. The researchers hypothesized this change effected the survey results due to the strain the open positions created at the time of the baseline survey and then the positions being filled before the post-intervention survey. The researchers also noted the occurrence of a detrimental earthquake in Haiti occupying the news as possibly hindering the effects of the intervention. The open response questions from the intervention group at the post intervention assessment created themes of awareness of mood and personal insight into their behavior. According to the researchers, due to the positive feedback from the intervention group, the journaling intervention is now included in new nurse orientation at the midwestern hospital where the study was conducted.

Exposure to chronic stressors such as unrealistic workloads, feeling unvalued, and dealing with death and dying, exacerbated by staffing shortages lead to burnout. This is a vicious cycle and a public health concern directly effecting the patient population. Chen et al. (2015) explored use of gratitude journaling as an intervention to mitigate the effects

of these chronic stressors. The researchers hypothesized the gratitude intervention group would report lower levels of perceived stress and depression. The study was conducted using a double-blind randomized control trial with a post-treatment follow up at 3 months. The participants consisted of 102 physicians, nurses, occupational and physical therapists. The participants were divided into three groups: gratitude journaling group, hassle journaling group, and control group. Those journaling were given specific instructions according to their group with a frequency of twice a week for 4 weeks. All participants were given the Chinese version of the Center for Epidemiologic Studies-Depression Scale questionnaire and Perceived Stress Scale before the intervention, after the intervention, and as a 3-month post-intervention follow-up. The study found the hassle group and the control group to have no significant difference in self-reported depression symptoms or perceived stress. The gratitude group reported a significant decrease depressive symptoms and perceived stress post intervention and at follow-up. The 3-month follow-up revealed a widening difference in perceived stress and depression symptoms between the control group and the gratitude group. The researchers reported the randomization of separation into groups failed as the control group had a higher ratio of experienced professionals. However, this was also considered a strengthening component of the research given those with more years of experience was associated with reduced stress pre-intervention strengthening the success of the gratitude intervention.

Gratitude can be an emotion, only brief in duration, or a state of mind in which one tends to be grateful. Gratitude has been linked to increased subjective well-being and improved physical health (Cheng et al., 2015; Millstein et al., 2016). Karns et al. (2017) studied the objective outcomes of gratitude intervention using MRI pre and post gratitude

journaling. The researchers hypothesized the higher the self-reported level of gratitude, the higher the degree of neural pure altruism. Neural pure altruism is measured by changes noted on the MRI scans. The researchers also hypothesized practicing gratitude through gratitude journaling would increase the visible neural altruism on the MRI post intervention scan in comparison to the preintervention scan. Participants were recruited from the University of Oregon psychology undergraduates through email with all female participants. The study consisted of 33 participants, 16 in the gratitude group and 17 in the control group. The researchers randomly assigned the participants to their group and utilized a double-blind design for the journaling intervention. Prior to the first MRI scan, the participants completed a gratitude questionnaire and the Principles of Care self-report which measures altruism. After the MRI, the participants received instructions for journaling depending on their group. The intervention lasted 3 weeks at which time the participants repeated the same questionnaires and received a repeat MRI. The study found those who self-reported higher levels of gratitude also presented with an increased presence of neural altruism on the MRI on the preintervention scan. The study also found gratitude journaling to positively effect self-reported level of gratitude. Those who scored lowest on the pretest had the most improvement in self-reported gratitude. The second scan also found increased presence of neural altruism on the MRI in those who self-reported higher levels of gratitude. The researchers use of all psychology undergraduate female participants limited the generality of the study however, use of women when applying the study to the female dominant nursing population was appropriate. The small sample size was also a study limitation, but use of an MRI to prove increased gratitude in those after intervention provided objective data.

Nurse burnout is a pandemic which is predicted to reach epic proportions by 2030 when one third of the nursing workforce in the United States will reach retirement age compounded by the aging boomer generation with increasing complicated chronic illnesses (Buerhaus et al., 2017). Research is needed in the exploration of reasonable and usable interventions in which nurses can increase resiliency as a means to combat nurse burnout. Redwine et al. (2016) explored the physical effect of gratitude journaling in heart failure patients. The researchers sought to investigate the effect of gratitude on physical health using objective measures hypothesizing the gratitude intervention would increase heart rate variability indicating elevated parasympathetic cardiac tone, and decrease inflammation as evidenced by lowered inflammatory biomarkers. The objective measures in the study were heart rate variability, in relation to autonomic nervous system dysregulation, and inflammation. The study consisted of 70 participants, men and women, using a random control trial. A computer algorithm randomly assigned the participants to either gratitude journaling as an intervention or treatment as usual (TAU). The participants were assessed pre-intervention, at 4 weeks (mid-intervention), and post-intervention at the 8 weeks. Blood draws were conducted at pre and post intervention assessments. At the mid-intervention assessment, participants in the journaling group mailed their journals to the researchers. Gratitude questionnaires were completed at all three assessment intervals. An additional gratitude journaling intervention was conducted at the post-intervention assessment in which participants were asked to complete a gratitude journal on site, where heart rate variability was measured in real time from the rest to completion of gratitude journaling. An increase in heart rate variability was noted in the gratitude journaling group post on site journaling in

comparison with the treatment as usual group. According to the researchers, increased heart rate variability was associated with healthy individuals in comparison to those with cardiovascular disease exhibiting decreased heart rate variability. The study also found a decrease of the basal plasma inflammatory index in those who participated in the 8-week gratitude journaling group compared to the control group. The study was limited by the moderate size and number of participants in the intervention group who dropped out, with only 23 of the original 34 completing the study. The control group 34 of the 36 participants completed the study. The study also did not assess biomarkers at the 4-week mark in comparison to the gratitude survey results. The researchers only conducted the onsite real time heart rate variability at the post-intervention assessment, possibly skewing the results as this intervention was not performed at baseline (Redwine et al., 2016).

Research validates the growing nursing shortage with the compounding variables worsening the crisis which include the aging baby boomer population, compounding chronic illnesses increasing the complexity of care required, staffing shortages, and the large percentage of the nursing workforce reaching retirement age by 2030 (Buerhaus et al., 2017). Exposure to chronic work-related stressors leads to burnout which is characterized by emotional exhaustion, cynicism, and feelings of inadequacy related to competence at work (Maslach & Leiter, 2016). Aiken et al. (2012), surveyed over 26,000 registered nurses in the United States with 34% reporting feelings of burnout. Data on the worldwide pandemic of nursing burnout is numerous (Jennings, 2008; Lee et al., 2016; Aiken et al., 2012; Chen & Chen, 2018; Rushton et al., 2015; Nastasa & Farcas, 2015; King & Bradley, 2019; Mealer et al., 2012; Burn et al., 2018). Research supports

the use of resiliency as a means to combat nurse burnout (Jackson et al., 2018; Rushton et al., 2015; Concilio et al., 2019; Kester & Wei, 2018; Wei et al., 2018). Research regarding gratitude's effects on resiliency, health, and the body is readily available (Millstein et al., 2016; Mealer et al., 2012; Emmons & Stern, 2013; Appel et al., 2013; Chen et al., 2015; Karns et al., 2017; Redwine et al., 2016). Data is limited with the use of gratitude journaling as a tool to increase resiliency as a means of combatting nurse burnout. Appel et al. (2013) conducted a single blind study of 91 medical surgical nurses without significant quantitative data to validate use of gratitude journaling and three good things as a means to increase resiliency in registered nurses. This researcher was unable to discover any other research utilizing gratitude journaling in nursing as a means of increasing resiliency and reducing nurse burnout. This lack of research demonstrates the need for this MSN thesis to investigate the use of gratitude journaling to increase resiliency and decrease burnout in cardiac surgery critical care nurses.

CHAPTER III

Methodology

Nurse burnout is a pandemic effecting the nursing population worldwide. Aiken et al. (2013) conducted a survey of more than 26,000 registered nurses in the United States with 34% of those surveyed reported feelings burnout. Feelings of burnout are a major variable in rate of nursing turnover fueling the nursing shortage (Chen & Chen, 2018). Resiliency, the natural or learned ability to adapt to change or recover from stressful and traumatic experiences, is a common characteristic amongst nurses resistant to burnout (Concilio et al., 2019). Positive emotions, such as gratitude, have the ability to negate negative emotions and thoughts, facilitating the development of resiliency (Emmons & Stern, 2013; Millstein et al., 2016; Mealer et al., 2012). Use of gratitude journaling, according to Emmons and Stern (2013), allows one to organize their thoughts, creates meaning within the context of gratitude, and is more effective than thoughts of gratitude alone. This MSN thesis researched if gratitude journaling changes levels of resiliency and burnout for registered nurses in the cardiac intensive care unit.

Study Design

This MSN thesis used gratitude journaling as an intervention to facilitate growth of resiliency as a means to combat workplace stress and burnout. The researcher used surveys in a convenience volunteer sample of cardiac surgery intensive care nurses. The research was done using a one group pre-and-post-test, quasi-experimental design consisting of a pre-intervention survey, followed by 21 days of intervention, then ending with the post-intervention survey. The researcher provided journals for each of the participants with instructions to journal for a least 5 minutes a day reflecting on the

events of the day for which they were grateful. The intervention lasted 21 days. At the end of the survey, the researcher would not collect the journals. The number of journal entries were self-reported by participants in the post-intervention survey. Two recruitment emails (Appendix A) were sent to the participants. The first email contained the link the pre-intervention survey (Appendix B) and the second email contained the link to the post-intervention survey (Appendix C).

Setting/Sample/Participants

The study was conducted in a cardiac surgery intensive care unit in a level III trauma center, public, rural area hospital on the east coast of the United States. Participants for this MSN thesis research were volunteer registered nurses who work in the cardiac surgery intensive care unit. No limitation was placed on employment status such as full time, part time, or per diem and no demographic data were collected. All registered nurses in the cardiac surgery intensive care unit were emailed an invite to participate in this research and flyers were posted around the unit to promote participation. Participants included males and females, ages 18 and older, without limitations or race, ethnicity, education or years of experience.

Measurement Methods

The Perceived Stress Scale (PSS-10), the Gratitude Questionnaire-Six Item Form (GQ-6), the Brief Resilience Scale: Items and Factor Loadings, and the Bergen Burnout Inventory (BBI) were used to quantitatively measure baseline and post-intervention responses of participants. Each instrument had a corresponding Likert scale. The survey items totaled 31 questions. Mean question scores (provided by Qualtrics) were used to calculate the mean score for each tool.

The Perceived Stress Scale (PSS-10) (Appendix D) was a ten-item questionnaire asking participants to rate how often in the last month they have experienced these stressful situations. Responses were ranked using a Likert scale of 0-4; 0= never and 4=very often. Four of the questions were reverse scored: 0=very often and 4=never. The PSS-10 did not have any cut off scores; however, the higher the score, the higher the level of stress. Cohen and Williamson (1988) verified reliability and validity in the PSS-10 confirming it is the best version of Perceived Stress Scale (as cited in Taylor, 2015, p. 90). However, the shorter version PSS-4 had a low reliability and therefore was not used by this researcher.

The Gratitude Questionnaire-Six Item Form (GQ-6) (Appendix F) was a 6-question form ranking scores based on a Likert scale of 1-7; 1=strongly disagree and 7=strongly agree. Two questions were reverse ranked, for example, an answer of 1 would equal 7 and an answer of 6 would equal 2. The total score would be between 6-42. According to Sumi (2017), the reliability of GQ-6 had been established with Cronbach's alphas=.76 to .87 and was cited in McCullough et al. (2002) and McCullough et al. (2004, as cited on p. 74). McCullough et al. (2002, as cited in Sumi, 2017, p. 75) established validity by comparison with other tools measuring gratitude and related topics such as life satisfaction, happiness, and optimism.

The Brief Resiliency Scale (BRS) (Appendix F) is a 6-question form with scores measured from 1-5 on a Likert scale; 1=strongly disagree and 5=strongly agree. On this tool, items 2, 4, & 6 are negatively worded and therefore reversely scored. The BRS assess resilience as the ability to recover or bounce back from stress. Smith et al. (2008) found the BRS to be to have both reliability and validity in four different samples in

comparison to various other tools such as the Connor-Davidson Resilience Scale (CD-RISC; Connor & Davidson, 2003, as cited in Smith et al., 2008, p. 195), the Ego Resiliency Scale (Block & Kremen, 1996, as cited in Smith et al., 2008, p. 196) and 15 other tools in areas including coping and social relationships. The BRS was administered twice in two of the samples, to establish test-retest reliability.

The Bergen Burnout Inventory (BBI-9) (Appendix G) is a 9-question survey using a Likert scale for the responses ranging from 1=completely disagree to 6=completely agree. The BBI-9 addresses the three dimensions of burnout: cynicism, exhaustion, and inadequacy. The study by Feldt et al. (2014) established validity of use of the BBI-9 for use of employees, stating previously the tool had only had established validity in the managerial population. Reliability has been established by Feldt et al. (2013, as cited in Feldt et al., 2014) in a 4-year longitudinal study.

Data Collection Procedures

Participants were recruited through an email invitation. The volunteer participants completed an informed consent in the pre-intervention survey (Appendix A) through Qualtrics. The sole source of data was the pre-and-post-intervention Qualtrics survey without collecting identifying information. A link to the Qualtrics pre-and-post-intervention surveys was sent via email to participants. All data collection was performed by this researcher and MSN thesis advisor, stored on a secure password protected computer in a password protected file, with researcher only access.

Protection of Human Subjects

This MSN thesis posed only minimal anticipated risk or harm to the participants. Institutional review board approval from both Gardner-Webb University and the research

site was granted prior to data collection. Each participant signed an informed consent as the first question on the pre-intervention survey and their identity, nor the site of research, was disclosed.

An institutional review board (IRB) is a group whose purpose to ensure human rights are not violated during the process of research. Each individual agreed to participate in this study did so on a strictly voluntary basis with knowledge they could withdraw from the study at any time and of their own accord, without negative consequences. This research qualified as IRB exempt because the only data collected, using Qualtrics software, was de-identified to protect participant identities. The research intervention did not pose more than minimal anticipated risk to the health or safety of volunteer participants. Gardner-Webb University and research site IRB committee approvals were granted prior to conducting the research study.

Data Analysis

Data entry and analysis was conducted by this researcher and MSN thesis advisor. A paired t-test was utilized for the statistical analysis of this study, allowing the researcher to compare the data from the same participants before and after intervention. According to the Boston University School of Public Health (2016), “A paired t-test is used when we are interested in the difference between two variables for the same subject. Often the two variables are separated by time” (p. 1). The p-value produced in the comparison of the pre-and-post-intervention score was used to determine statistical significance with use of alpha (α) < 0.01.

CHAPTER IV

Results

The strain on the healthcare system related to the nursing shortage is felt worldwide (Lee et al., 2016). This researcher sought an intervention to strengthen the current nursing workforce by decreasing nurse burnout. Concilio et al. (2019) reported nurse burnout as a component leading to staffing shortages and increased turnover rates. According to the Mayo Clinic (2018), symptoms of burnout include cynicism, irritability, exhaustion, and public meltdowns leading to depersonalization and decreased feelings of accomplishment. In the United States, nearly one third of the nursing workforce will reach retirement age by 2030. This statistic is further complicated by the predominant age of novice nurses entering the workforce being 35 years old and up, who have less years to work compared to younger generations, reinforcing the need to strengthen the current workforce (Buerhaus et al., 2017). According to the American Psychological Association (2019b), having an optimistic outlook regarding the positive aspects of one's life and journaling are ways to increase resilience which has been found to aide in decreasing feelings of burnout. This researcher investigated the use of gratitude journaling as a 21-day intervention as a means to increase gratitude and resilience while decreasing perceived stress and feelings of burnout.

Sample Characteristics

The target population was cardiac surgery intensive care nurses working in a regional medical center in the southeastern United States. Of the 33 staff members whom were invited to participate in the study, 22 participants started the pre-intervention survey, 20 completed the pre-intervention survey. However, only 11 participants

completed the intervention and the post-intervention survey. No demographic data was collected in the survey; however, the age range of the nursing staff on the unit was 23-65 years old.

Tools Used to Measure Outcomes

This research was aimed to increase resiliency and gratitude while decreasing feelings of stress and burnout. The participants were instructed to complete the pre-intervention survey which included the Perceived Stress Scale (PSS), Gratitude Questionnaire (GQ), Brief Resiliency Scale (BRS), and the Bergen Burnout Inventory (BBI). At completion of the pre-intervention survey, participants were given instructions to journal daily for 21 days detailing at least one thing during that day for which they were grateful. At the end of the intervention, participants were asked to complete the post-intervention survey containing the same four measurement tools (PSS, GQ, BRS, & BBI). The data collected from the pre and post-intervention surveys served as the sole source of data. Although four independent survey tools were utilized in both the baseline data collection and the post-intervention data collection, the tools were combined into one pre-intervention survey and one post-intervention survey in Qualtrics for the convenience of the participants. From the data collected, this researcher used the mean score (provided by Qualtrics) for each question to calculate the mean score for each survey tool. This researcher then used the mean scores for each question in a paired t-test statistical analysis via GraphPad QuickCalcs to calculate the p value for each data set. The data was entered into an Excel spreadsheet for comparison and further analysis. The overall scores for each tool are presented in Figure 2.

Figure 2

Overall Survey Results

Scale	# Pre-Participants	# Post-Participants	Pre-I Mean	Post-I Mean	% Change	Paired T-test
PSS	22	11	18.42	13.64	25.95%	p=0.0001
GQ	22	11	36	37.1	3.06%	p=0.3052
BRS	21	11	3.61	3.89	7.76%	p<0.0001
BBi	20	11	2.68	2.47	7.84%	p=0.1116

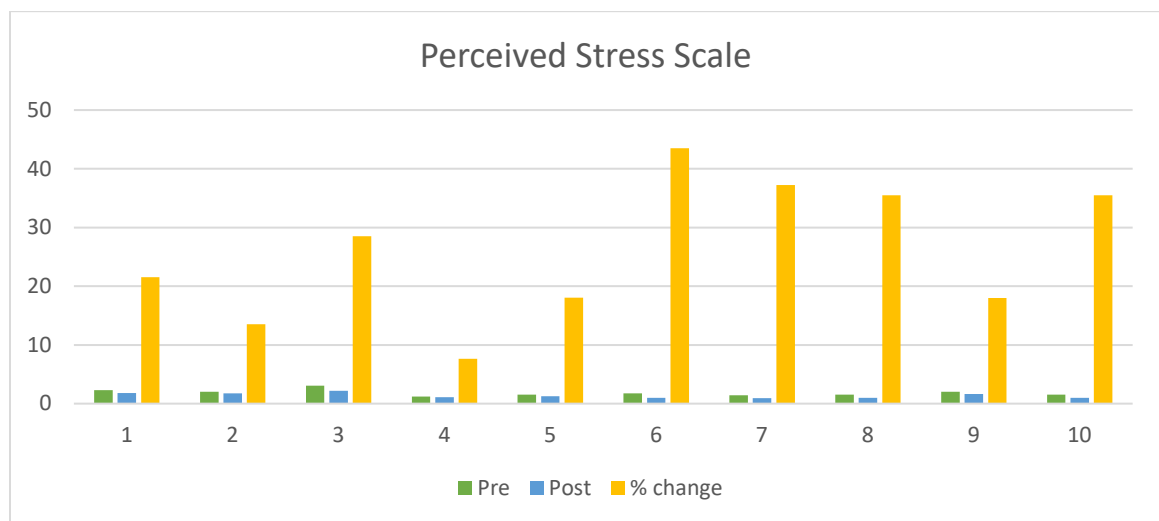
No demographic or identifying data was collected. The journals were never seen by the researcher. Participation in the study relied upon the integrity of the participants. The intended primary outcome of this research was to determine if daily gratitude journaling would increase resilience and feelings of gratitude while decreasing the level of perceived stress and burnout in cardiac surgery intensive care nurses.

Major Findings

A total of 22 participants completed the pre-intervention PSS survey. Of those 22 participants, 11 completed the intervention and the post-intervention PSS survey. The PSS mean pre-intervention score was 18.42 and the post intervention PSS mean score was 13.64. This represents a 25.95% change from the baseline scores to the post intervention scores. A paired t-test statistical analysis found the decrease in the mean PSS score to be statistically significant ($t=6.4095$, $p=0.0001$, two tailed); however, based on the small sample size and the high rate of attrition in this study, the results may not be practically significant or generalizable to the population. Based on this sample, the use of gratitude journaling during the 21-day intervention decreased the participants perceived level of stress, but more research will be needed to validate this finding. Figure 3 displays the data from the pre and post-intervention PSS scores while Figure 4 displays the change in score by question in the form of a bar graph.

Figure 3*PSS Scores Comparison by Question*

PSS Q#	Pre	Post	% change	SD Pre	SD Post	Min Pre	Max Pre	Min Post	Max Post
1	2.32	1.82	21.55	0.63	0.57	1	3	1	3
2	2	1.73	13.5	0.95	0.62	0	4	1	3
3	3.05	2.18	28.52	0.77	0.83	1	4	1	4
4	1.18	1.09	7.62	0.72	0.79	0	3	0	3
5	1.55	1.27	18.06	0.5	0.62	1	2	0	2
6	1.77	1	43.5	0.67	0.74	1	3	1	2
7	1.45	0.91	37.24	0.84	0.67	0	3	0	2
8	1.55	1	35.48	0.72	0.6	0	3	0	2
9	2	1.64	18	0.85	0.98	0	4	0	4
10	1.55	1	35.48	0.94	0.85	0	3	0	2

Figure 4*PSS % Change Bar Graph*

A total of 22 participants completed the pre-intervention GQ survey. Out of those 22 participants, 11 completed the intervention and the post-intervention survey. The mean GQ pre-intervention score was 36 and the mean GQ post intervention score was 37.1. This represents a 3.06% change from the baseline scores to the post intervention scores. A paired t-test statistical analysis found the increase in GQ scores not to be statistically significant ($t=1.1421$, $p=0.3052$, two tailed). Based on this sample, the use of gratitude journaling during the 21-day intervention increased the gratitude scores, but this

cannot be proven to be more than a finding by chance because the p value is > 0.05 .

Figure 5 displays the GQ data from the pre and post intervention scores while Figure 6 displays the GQ change in score by question in the form of a bar graph.

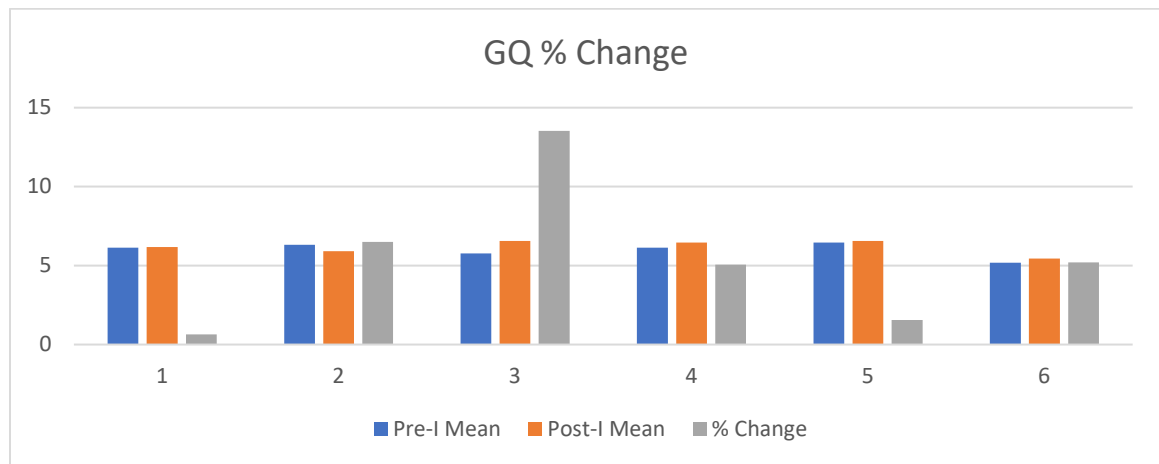
Figure 5

CQ Scores by Question

Question #	Pre-I Mean	Post-I Mean	% Change	SD Pre	SD Post	Min Pre	Max Pre	Min Post	Max Post
1	6.14	6.18	0.65	1.32	1.7	1	7	1	7
2	6.32	5.91	6.49	0.82	1.68	4	7	1	7
3	5.77	6.55	13.52	1.08	0.5	3	7	6	7
4	6.14	6.45	5.05	0.81	0.89	4	7	4	7
5	6.45	6.55	1.55	0.58	0.89	5	7	4	7
6	5.18	5.45	5.21	1.56	1.56	2	7	2	7

Figure 6

GQ % Change Graph



The BRS was completed by 21 participants in the baseline survey. Of those 21 participants, 11 completed the intervention and the post-intervention BRS survey. The mean BRS pre-intervention score was 3.61 and the mean BRS post-intervention score was 3.89. This represents a 7.76% change from the baseline scores to the post intervention scores. A paired t-test statistical analysis found the increase in the BRS scores to be statistically significant ($t=23.0769$, $p<0.0001$, two tailed); however, based on

the small sample size and the high rate of attrition in this study, the results may not be practically significant or generalizable to the population. Based on this sample, the use of gratitude journaling during the 21-day intervention increased the participants mean resiliency score, but more research will be needed to validate this finding. Figure 7 displays the data from the pre and post intervention BRS scores while Figure 8 displays the change in score by question in the form of a bar graph.

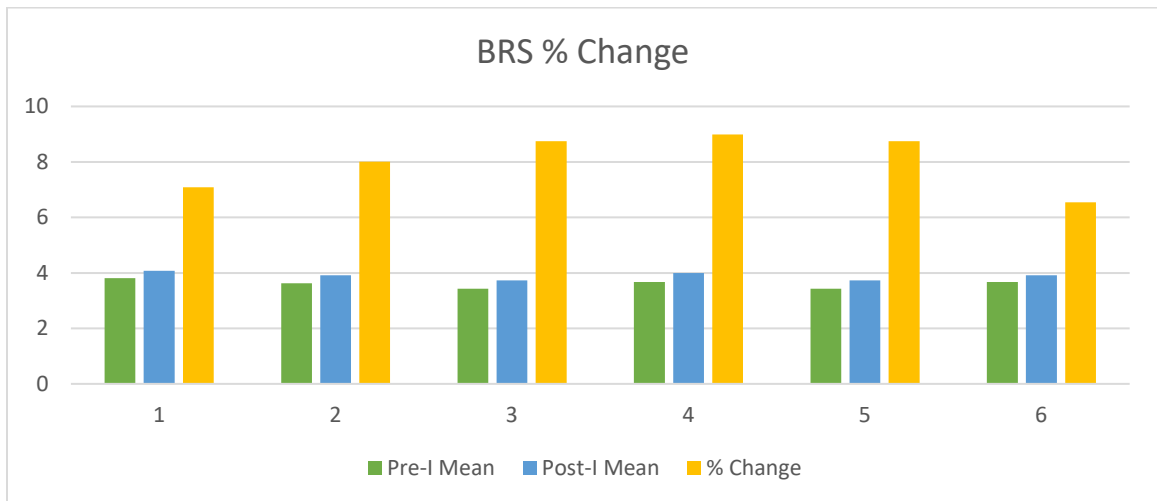
Figure 7

BRS Scores by Question

Question #	Pre-I Mean	Post-I Mean	% Change	SD Pre	SD Post	Min Pre	Max Pre	Min Post	Max Post
1	3.81	4.08	7.09	0.91	0.86	2	5	3	5
2	3.62	3.91	8.01	0.95	0.79	2	5	3	5
3	3.43	3.73	8.75	0.95	1.21	1	5	1	5
4	3.67	4	8.99	0.89	0.95	2	5	2	5
5	3.43	3.73	8.75	0.85	0.86	2	5	3	5
6	3.67	3.91	6.54	1.13	1	1	5	2	5

Figure 8

BRS % Change Graph



The BBI was completed by 20 participants in the pre-intervention survey. Of those 20 participants, 11 completed the intervention and the post-intervention survey. The mean BBI pre-intervention score was 2.68 and the mean BBI post intervention score was

2.47. This represents a 7.84% decrease from the pre-intervention scores to the post-intervention scores. A paired t-test statistical analysis found the decrease in the overall tool score not to be statistically significant ($t=1.7879$, $p=0.1116$, two tailed). Based on this sample, the use of gratitude journaling during the 21-day intervention decreased the participants feelings of burnout but this cannot be proven to be more than a finding by chance because the p value is > 0.05 . Figure 9 displays the data from the pre and post intervention BBI scores while Figure 10 displays the change in score by question in the form of a bar graph.

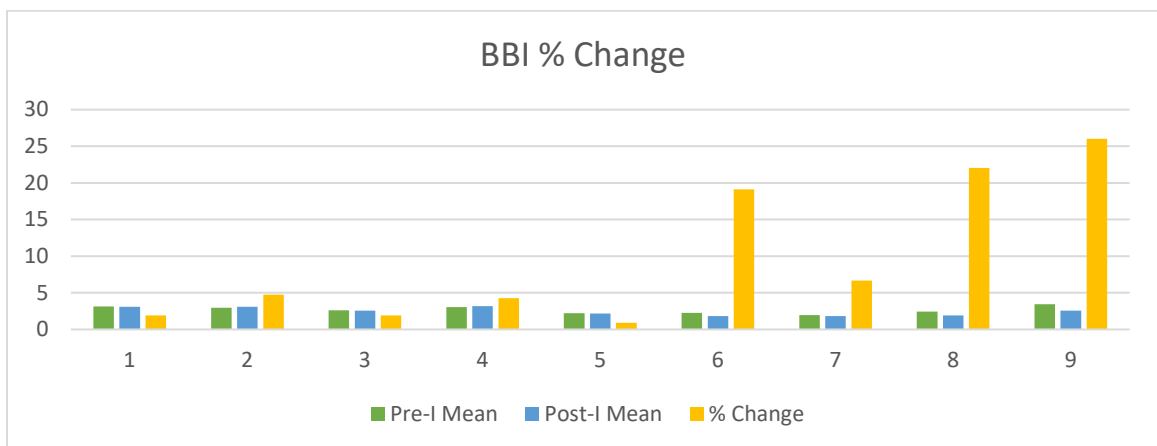
Figure 9

BBI Score by Question

Question #	Pre-I Mean	Post-I Mean	% Change	SD Pre	SD Post	Min pre	Max pre	Min Post	Max Post
1	3.15	3.09	1.9	1.31	1.31	1	6	1	5
2	2.95	3.09	4.75	1.32	1.56	1	6	1	6
3	2.6	2.55	1.92	1.5	1.67	1	6	1	6
4	3.05	3.18	4.26	1.56	1.95	1	6	1	6
5	2.2	2.18	0.91	1.21	1.27	1	5	1	5
6	2.25	1.82	19.1	0.99	1.11	1	4	1	5
7	1.95	1.82	6.67	1.02	1.4	1	4	1	6
8	2.45	1.91	22.04	1.07	1.16	1	4	1	4
9	3.45	2.55	26.01	1.53	1.23	1	6	1	5

Figure 10

BBI % Change Graph

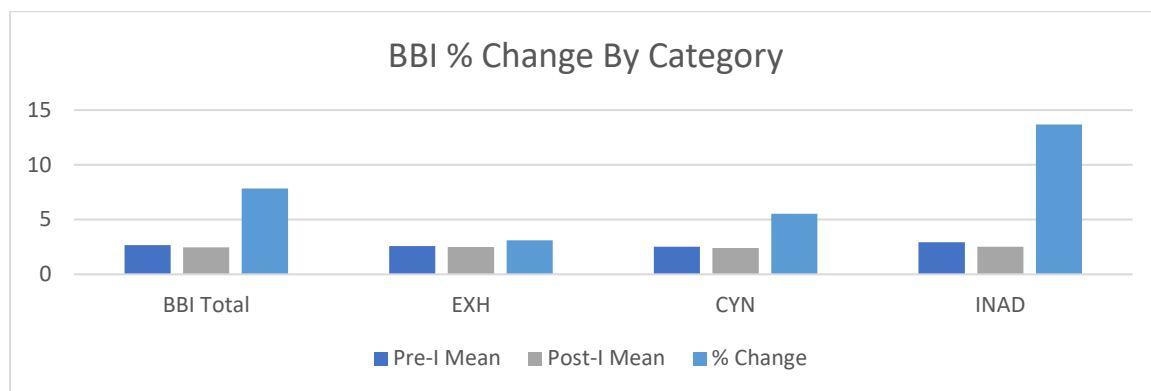


This researcher noted the results of the overall BBI, but further investigated the subcategories within the tool. The BBI is subdivided into the three dimensions of burnout; exhaustion (EXH) cynicism (CYN), and inadequacy (INAD). The mean baseline score for EXH was 2.57 and the post-intervention mean score was 2.49. Although the score decreased, the paired t-test analysis gave a p value of 0.0863 which was not statistically significant. The mean score for CYN in the baseline survey was 2.53 and the post-intervention score decreased to 2.39. However, this decrease in score was also not statistically significant ($p=0.5656$). The final category in the BBI was INAD, which had a mean pre-intervention score of 2.92 with a decrease in score noted in post-intervention mean score to 2.52. This change was also not statistically significant ($p=0.5656$). Figure 11 compares the overall BBI scores to the subcategories. Figure 12 displays the data from the BBI percent change by category in a bar graph.

Figure 11

BBI Scores by Category

Scale	Pre-I Mean	Post-I Mean	% Change	Paired T test
BBI Total	2.68	2.47	7.84	$p=0.1116$
EXH	2.57	2.49	3.11	$p=0.0863$
CYN	2.53	2.39	5.53	$p=0.5656$
INAD	2.92	2.52	13.7	$p=0.3112$

Figure 12*BBI % Change Categories Bar Graph***Summary**

The data analysis using a paired t-test to compare the pre-intervention and post-intervention survey tools provided evidence for a statistically significant decrease in perceived stress scores and a statistically significant increase in resiliency scores. The GQ score means increased slightly from 36 to 37.1 while the BBI mean scores decreased slightly from 2.68 to 2.47. However, these changes by definition were not statistically significant. This researcher was curious if any of the three categories within the BBI underwent significant change and therefore statistical analysis was done to compare EXH, CYN, and INAD baseline data to post-intervention data. Although, none of these categories experienced a statistically significant decrease in score, all three categories mean scores did decrease. While 22 participants completed the PSS & GQ pre-intervention surveys, only 20 participants completed the entire pre-intervention survey. Of these 20 participants, only 11 completed the intervention followed by the post-intervention survey. Due to the small sample size and large attrition rate of this study, the findings from this study require further investigation to establish reliability and validity.

CHAPTER V

Discussion

The purpose of this MSN thesis was to explore the use of gratitude journaling as an intervention to decrease perceived stress and feelings of burnout while increasing resiliency and feelings of gratitude. This researcher's curiosity in an intervention to combat nurse burnout began after witnessing an episode of burnout in the intensive care setting characterized by a public meltdown, crying, and yelling. This study consisted of a pre-intervention survey containing the PSS, GQ, BRS, & BBI followed by 21 days of gratitude journaling. At the end of the intervention, the participants repeated the survey and the mean scores for each tool was compared using the paired t-test for statistical analysis.

Implication of Findings

The prevalence of nursing burnout, the nursing shortage, and the increased nursing turnover rate documented in the literature review gave evidence of the need for an intervention to combat nurse burnout and strengthen the current nursing population (Buerhaus et al., 2017; Lee et al., 2016; Concilio et al., 2019). These stressors are now further complicated by the Covid-19 pandemic, increasing the need for an intervention that is effective in strengthening the nursing workforce by providing coping strategies. In the review of literature, the use of gratitude journaling has been explored as means of increasing resiliency in multiple settings including heart failure patients and in the mental health setting (Redwine et al., 2016; Wei et al., 2018). No data was found by this researcher regarding the use of gratitude journaling on cardiac surgery intensive care nurses. The intensive care setting is a highly complex and demanding area of nursing in

which nurses must frequently cope with patient death and dying warranting investigation into a tool to increasing the coping abilities of the nurses (Mealer et al., 2012).

This investigation of the use of gratitude journaling in cardiac surgery intensive care nurses found the post-intervention survey produced a statistically significant lower perceived stress (PSS) mean score from the baseline data (Figure 2). The study also found a statistically significant increase in the mean resiliency (BRS) score. These findings provided promising data for the use of gratitude journaling in the intensive care nursing population, but needed further research to investigate its usefulness. This study was done on a convenience sample from one regional medical center in the southeastern United States with participants from a single cardiac surgery intensive care unit. The study consisted of a small sample size, with only 11 participants completing the study, and a high attrition rate (22 participants began the preintervention survey). Although all four mean scale scores improved from the baseline data, the evidence was not generalizable to the population and required the establishment of reliability and validity through expanded research.

Application to Theoretical Framework

The environment nurses are exposed to in the intensive care setting is a high stress, demanding, complex environment which is now further burdened with a new culture of fluid change due to the ever-changing nature of the Covid-19 pandemic. This environment is in constant interaction with the nurse. Each nurse perceives each interaction differently with no two interactions being exactly the same. The nurse's level of resiliency impacts this interpretation of the environment (Parse, 2015). This researcher hypothesized that retraining-training (not an official paradox) the mind to default to

gratitude over cynicism would decrease the nurse's perception of stress and feelings of burnout. The study found that through use of gratitude journaling, the participants experienced a 25% decrease in mean perceived stress scores and a 7% decrease in mean burnout scores. The results also found the participants had a 3% increase in gratitude scores and a 7% increase in resiliency scores. This researcher believes that with more research and data, the retraining-training (not an official paradox) of the mind to default to gratitude instead of cynicism maybe a useful weapon in the battle against nurse burnout.

Limitations

The limitations of this study included the use of a small sample size from one hospital in a single unit. Due to this small sample size, no demographic information was able to be obtained due to the likelihood of identifying participants. The sample may have possibly included nursing aides, registered nurses, and advanced practice nurses as the invitation email was sent to all unit employees from the facility address book. The time constraint of this study may have limited both the number of participants in the study and the number of journal entries between the pre-intervention survey and the post-intervention survey. Future studies should consider a longer intervention with increased flexibility in survey data collection due to the nature of the population's work schedule (weekends vs part time vs per diem nurses). Participants were also given very little instruction for the intervention, with the only instruction being to journal for 5 minutes a day detailing something for which they are grateful for that day. Future studies may consider more detailed instructions, possibly in an experimental design using multiple intervention groups and a control group. Future studies should also consider a post

intervention follow up 30 days after the intervention. The study was conducted in the midst of the Covid-19 pandemic, possibly skewing the results and causing the decreased post-intervention survey participation. It is irrefutable that the pandemic has increased the stress level in the acute care setting around the world. The effects of the pandemic on this intervention are unknown.

Implications for Nursing

Despite the limited statistical significance of the intervention, all four tools (PSS, GQ, BRS, & BBI) had mean score improvement from baseline data collection to post-intervention. This data is promising for future research using gratitude journaling as a means to decrease perceived stress and feelings of burnout while increasing resiliency and gratitude. This researcher believes more research is warranted in the use of gratitude journaling to both strengthen the current nursing workforce and to give novice nurses the knowledge, tools, and skills to cope with the increased stressors experienced by nurses around the world.

Recommendations

This researcher recommends collection of demographic data and the number of journal entries for comparison in the data. This researcher also recommends an extended period of time, perhaps a 7-day span, in which the participants can complete the pre and post-intervention surveys to increase participation. Creation of an easily accessible means of electronic communication, such a private Facebook group, blog, or electronic group chat, as a platform to answer questions and provide study updates and reminders to participants might be beneficial. Future researchers should consider a longer intervention, perhaps 60 days with a baseline survey, halfway survey, completion survey, then 30 day

follow survey for further data comparison with a larger group of participants. Further studies should also consider educating the participants about gratitude journaling after the pre-intervention survey before starting their journaling. This would provide an opportunity to answer any questions regarding the study and may increase compliance with the intervention.

Conclusion

Nurses are in constant contact with an environment whittled with stressors. These stressors include short staffing, frequent exposure to death and dying, and constantly increasing demands further complicated by an increasingly complex patient population. Every nurse interprets and perceives their interactions with the environment and stressors differently. This constant exposure to stressors can lead to feelings of exhaustion, cynicism, and inadequacy associated with burnout. Some people are blessed with an innate ability to bounce back, however this tendency to be resilient can be a learned trait. This MSN thesis focused on training-retraining the mind to default to gratitude as a means to increase resiliency in the battle against nurse burnout through daily gratitude journaling.

The research began before the Covid-19 pandemic further strained the already stressed healthcare system in the United States complicating the environment with lack of personal protective equipment (PPE), supply and medication shortages, experimental treatments, and the high mortality rate of those critically ill in the intensive care setting (Christenbury, 2020). This researcher believes the Covid-19 pandemic has strengthened the case for more research into gratitude journaling as a coping mechanism in the nursing population. Nursing research must continue efforts to strengthen our profession through

investigation of tools to aide nurses to not only survive but to thrive in the exacting healthcare environment across the United States.

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Appendix A

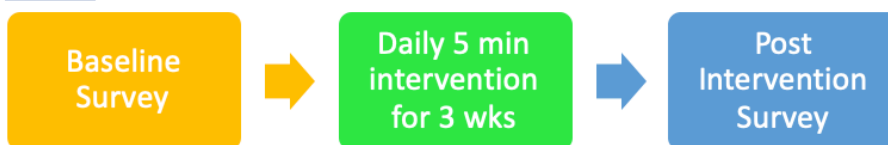
Recruitment Signage and Email

I NEED YOUR HELP!

Would you like to participate in a study?

Who? CSICU Nurses

What?



When? TBA- pending IRB approval

Where? This intervention can be done anywhere at any time of day.

Everyone will be sent an email invitation to participate. Contact me via email, text, or in person if you have any questions.

**msimpson@capefearvalley.com
mindybridgy05@yahoo.com
828-817-6217**

*****No identifying information will be obtained in this study*****

Email:

Hello everyone!

As many of you know, I am nearly finished with my graduate program. I am seeking participants to complete the study for my thesis. I know your time is precious so I have made it as short and simple as possible. No identifying information will be obtained. The intervention, gratitude journal entries, will not be read or collected by the researcher.

If you would like to participate in this study, please click the following link for the pre-intervention survey which contains the consent:

https://qfreeaccountssjc1.az1.qualtrics.com/jfe/form/SV_6gwxotCNfXYyzIx. The password to the survey is 'CSICU'.

Feel free to ask any questions via email, text, or in person. I would love to have as many participants as possible.

Thank you,

Mindy RN

Appendix B

Pre-intervention Survey

Gratitude Journaling Pre-intervention Survey

1. Informed Consent Form

Title of Study: Gratitude Journaling as an Intervention to Combat Burnout in Cardiac Surgery Intensive Care Nurses

Researcher: Melinda “Mindy” Simpson MSN education student

Purpose

The purpose of this MSN thesis is to explore an intervention to combat nurse burnout. Nurse burnout is a prevalent occurrence throughout the world resulting from chronic exposure to stressful work environments, job dissatisfaction, lack of autonomy, emotional exhaustion, and exposure to death and dying. This researcher will focus on the use of gratitude journaling to increase resiliency and reduce perceived stress and burnout in cardiac surgery intensive care nurses. This researcher hypothesizes that through daily gratitude journaling, the nurse will have a decreased perception of stress while experiencing an increased perception of gratitude and resilience leading to a decreased feelings of burnout.

Procedure

Complete a pre-intervention survey. Each participant will then journal for at least 5 minutes per day for 21 days, describing something that happened during the day the participant is grateful for. The participants will then complete a post intervention survey.

Time Required

It is anticipated that the study will require about 165 *minutes/hours* of your time. Thirty minutes estimated for pre-intervention survey and 30 minutes estimated for the post intervention survey. Five minutes per day of journaling for 21 days equals 165 minutes total.

Voluntary Participation

Participation in this study is voluntary. You have the right to withdraw from the research study prior to submitting the survey by closing the survey browser. You also have the right to refuse to answer any question(s) for any reason without penalty. If you need additional services, they may contact the hospital's Employee Assistance Program at 800-535-4841 ext. 523 or complete an online request for services at <https://www.theeap.com/contact-us>.

Confidentiality

The information that you give in the study will be handled confidentially. Your data will be anonymous which means that your name will not be collected or linked to the data. Surveys will be obtained anonymously.

Risks

There are no anticipated risks in this study

Benefits

There are no direct benefits associated with participation in this study. The study may help us to understand the role of gratitude journaling as an intervention to increase resiliency and decrease perceived stress and burnout. The Institutional Review Board at Gardner-Webb University has determined that participation in this study poses no more than minimal risk to participants.

Payment

You will receive no payment for participating in the study.

Right to Withdraw From the Study

You have the right to withdraw from the study prior to submission of the survey without penalty.

How to Withdraw From the Study

If you wish to withdraw after the initial survey is completed, you are not obligated to complete the post-survey. There is no ability to withdraw from the study once the post-survey has been submitted because all of the data is collected anonymously.

If you have questions about the study, contact the following individuals.

Researcher's Name: Melinda "Mindy" Simpson

Department: Hunt School of Nursing

Gardner-Webb University

Boiling Springs, NC 28017

Telephone number: 828-817-6217

Researcher Email Address: msimpson@gardner-webb.edu

Faculty Advisor Name: Dr. Julia Knauff

Department: Hunt School of Nursing

Gardner-Webb University

Boiling Springs, NC 28017

Faculty Advisor Telephone Number: 704-406-2679

Faculty Advisor Email Address: Jknauff@gardner-webb.edu

If the research design of the study necessitates that its full scope is not explained prior to participation, it will be explained to you after completion of the study. If you have concerns about your rights or how you are being treated, or if you have

questions, want more information, or have suggestions, please contact the IRB Institutional Administrator listed below.

Dr. Sydney K. Brown
IRB Institutional Administrator
Gardner-Webb University
Boiling Springs, NC 28017
Telephone: 704-406-3019
Email: skbrown@gardner-webb.edu

Voluntary Consent by Participant

I have read the information in this consent form and fully understand the contents of this document. I have had a chance to ask any questions concerning this study and they have been answered for me. I agree to participate in this study.

Perceived Stress Scale

The questions in this scale ask you about your feelings and thoughts during the last month/ In each case, you will be asked to indicate by selecting how often you felt or thought a certain way.

1. In the last month, how often have you been upset because of something that had happened unexpectedly?
 - a. Never
 - b. Almost never
 - c. Sometimes
 - d. Fairly often
 - e. Very often
2. In the last month, how often have you felt that you were unable to control the important things in your life?
 - a. Never
 - b. Almost never
 - c. Sometimes
 - d. Fairly often
 - e. Very often
3. In the last month, how often have you felt nervous and “stressed”?
 - a. Never
 - b. Almost never
 - c. Sometimes
 - d. Fairly often
 - e. Very often

4. In the last month, how often have you felt confident about your ability to handle your personal problems?
 - a. Never
 - b. Almost never
 - c. Sometimes
 - d. Fairly often
 - e. Very often
5. In the last month, how often have you felt that things were going your way?
 - a. Never
 - b. Almost never
 - c. Sometimes
 - d. Fairly often
 - e. Very often
6. In the last month, how often have you found that you could not cope with all the things you had to do?
 - a. Never
 - b. Almost never
 - c. Sometimes
 - d. Fairly often
 - e. Very often
7. In the last month, how often have you been able to control irritations in your life?
 - a. Never
 - b. Almost never
 - c. Sometimes
 - d. Fairly often
 - e. Very often
8. In the last month, how often have you felt that you were on top of things?
 - a. Never
 - b. Almost never
 - c. Sometimes
 - d. Fairly often
 - e. Very often
9. In the last month, how often have you been angered because things were out of your control?
 - a. Never
 - b. Almost never
 - c. Sometimes
 - d. Fairly often
 - e. Very often

10. In the last month, how often have you felt difficulties were piling up so high that you could not overcome them?
- a. Never
 - b. Almost never
 - c. Sometimes
 - d. Fairly often
 - e. Very often

The Gratitude Questionnaire

Using the scale below as a guide, select the number below each statement to indicate how much you agree with it.

- 1. I have so much in life to be thankful for.
 - a. Strongly disagree
 - b. Disagree
 - c. Slightly disagree
 - d. Neutral
 - e. Slightly agree
 - f. Agree
 - g. Strongly agree
- 2. If I had to list everything that I felt grateful for, it would be a very long list.
 - a. Strongly disagree
 - b. Disagree
 - c. Slightly disagree
 - d. Neutral
 - e. Slightly agree
 - f. Agree
 - g. Strongly agree
- 3. When I look at the world, I don't see much I would be grateful for.
 - a. Strongly disagree
 - b. Disagree
 - c. Slightly disagree
 - d. Neutral
 - e. Slightly agree
 - f. Agree
 - g. Strongly agree
- 4. I am grateful to a wide variety people.
 - a. Strongly disagree
 - b. Disagree
 - c. Slightly disagree
 - d. Neutral

- e. Slightly agree
 - f. Agree
 - g. Strongly agree
5. As I get older, I find myself more able to appreciate people, events, and situations that have been part of my life and history.
- a. Strongly disagree
 - b. Disagree
 - c. Slightly disagree
 - d. Neutral
 - e. Slightly agree
 - f. Agree
 - g. Strongly agree
6. Long amounts of time can go by before I feel grateful to something or someone
- a. Strongly disagree
 - b. Disagree
 - c. Slightly disagree
 - d. Neutral
 - e. Slightly agree
 - f. Agree
 - g. Strongly agree

Brief Resilience Scale

Respond to the statement below by selecting one answer that best describes you.

1. I tend to bounce back quickly after hard times.
- a. Strongly disagree
 - b. Disagree
 - c. Neutral
 - d. Agree
 - e. Strongly Agree
2. I have a hard time making it through stressful events.
- a. Strongly disagree
 - b. Disagree
 - c. Neutral
 - d. Agree
 - e. Strongly Agree
3. It does not take me long to recover from a stressful event.
- a. Strongly disagree
 - b. Disagree
 - c. Neutral

- d. Agree
 - e. Strongly Agree
4. It is hard for me to snap back when something bad happens.
- a. Strongly disagree
 - b. Disagree
 - c. Neutral
 - d. Agree
 - e. Strongly Agree
5. I usually come through difficult times with little trouble.
- a. Strongly disagree
 - b. Disagree
 - c. Neutral
 - d. Agree
 - e. Strongly Agree
6. I tend to take a long time to get over setbacks in my life.
- a. Strongly disagree
 - b. Disagree
 - c. Neutral
 - d. Agree
 - e. Strongly Agree

Bergen Burnout Inventory (BBI)

Please choose the alternative that best describes your situation (estimation from a previous month).

1. I am snowed under with work.
- a. Completely disagree
 - b. Disagree
 - c. Neutral
 - d. Agree
 - e. Completely Agree
2. I feel dispirited at work and I think of leaving my job.
- a. Completely disagree
 - b. Disagree
 - c. Neutral
 - d. Agree
 - e. Completely Agree
3. I often sleep poorly because of the circumstances at work.
- a. Completely disagree
 - b. Disagree

- c. Neutral
 - d. Agree
 - e. Completely Agree
4. I frequently question the value of my work.
- a. Completely disagree
 - b. Disagree
 - c. Neutral
 - d. Agree
 - e. Completely Agree
5. I feel that I have gradually less to give.
- a. Completely disagree
 - b. Disagree
 - c. Neutral
 - d. Agree
 - e. Completely Agree
6. My expectations to my job and to my performance have been reduced.
- a. Completely disagree
 - b. Disagree
 - c. Neutral
 - d. Agree
 - e. Completely Agree
7. I constantly have bad conscience because my work forces me to neglect my close friends and relatives.
- a. Completely disagree
 - b. Disagree
 - c. Neutral
 - d. Agree
 - e. Completely Agree
8. I feel that I am gradually losing interest in my customers or my other employees.
- a. Completely disagree
 - b. Disagree
 - c. Neutral
 - d. Agree
 - e. Completely Agree
9. Honestly, I felt more appreciated at work before.
- a. Completely disagree
 - b. Disagree
 - c. Neutral
 - d. Agree
 - e. Completely Agree

Thank you for participating in the Gratitude Journaling Pre-intervention Survey. The next step of this project is for each participant to select a notebook and a pen from a box located in the breakroom on (dates TBD) between the hours of 0700 and 0800, 1900 and 2000. The notebook and pen will be placed in an unsealed, large, self-sealing envelope. No personally identifying information should be written in the notebook. Each participant will then spend at least 5 minutes per day for 21 days, reflecting on and journaling about something that happened during the day, which they were grateful for.

Appendix C

Post-Intervention Survey

Perceived Stress Scale

The questions in this scale ask you about your feelings and thoughts during the last month/ In each case, you will be asked to indicate by selecting how often you felt or thought a certain way.

1. In the last month, how often have you been upset because of something that had happened unexpectedly?
 - a. Never
 - b. Almost never
 - c. Sometimes
 - d. Fairly often
 - e. Very often
2. In the last month, how often have you felt that you were unable to control the important things in your life?
 - a. Never
 - b. Almost never
 - c. Sometimes
 - d. Fairly often
 - e. Very often
3. In the last month, how often have you felt nervous and “stressed”?
 - a. Never
 - b. Almost never
 - c. Sometimes
 - d. Fairly often
 - e. Very often
4. In the last month, how often have you felt confident about your ability to handle your personal problems?
 - a. Never
 - b. Almost never
 - c. Sometimes
 - d. Fairly often
 - e. Very often
5. In the last month, how often have you felt that things were going your way?
 - a. Never
 - b. Almost never
 - c. Sometimes
 - d. Fairly often

- e. Very often
6. In the last month, how often have you found that you could not cope with all the things you had to do?
- a. Never
 - b. Almost never
 - c. Sometimes
 - d. Fairly often
 - e. Very often
7. In the last month, how often have you been able to control irritations in your life?
- a. Never
 - b. Almost never
 - c. Sometimes
 - d. Fairly often
 - e. Very often
8. In the last month, how often have you felt that you were on top of things?
- a. Never
 - b. Almost never
 - c. Sometimes
 - d. Fairly often
 - e. Very often
9. In the last month, how often have you been angered because things were out of your control?
- a. Never
 - b. Almost never
 - c. Sometimes
 - d. Fairly often
 - e. Very often
10. In the last month, how often have you felt difficulties were piling up so high that you could not overcome them?
- a. Never
 - b. Almost never
 - c. Sometimes
 - d. Fairly often
 - e. Very often

The Gratitude Questionnaire

Using the scale below as a guide, select the number below each statement to indicate how much you agree with it.

1. I have so much in life to be thankful for.

- a. Strongly disagree
 - b. Disagree
 - c. Slightly disagree
 - d. Neutral
 - e. Slightly agree
 - f. Agree
 - g. Strongly agree
2. If I had to list everything that I felt grateful for, it would be a very long list.
- a. Strongly disagree
 - b. Disagree
 - c. Slightly disagree
 - d. Neutral
 - e. Slightly agree
 - f. Agree
 - g. Strongly agree
3. When I look at the world, I don't see much I would be grateful for.
- a. Strongly disagree
 - b. Disagree
 - c. Slightly disagree
 - d. Neutral
 - e. Slightly agree
 - f. Agree
 - g. Strongly agree
4. I am grateful to a wide variety people.
- a. Strongly disagree
 - b. Disagree
 - c. Slightly disagree
 - d. Neutral
 - e. Slightly agree
 - f. Agree
 - g. Strongly agree
5. As I get older, I find myself more able to appreciate people, events, and situations that have been part of my life and history.
- a. Strongly disagree
 - b. Disagree
 - c. Slightly disagree
 - d. Neutral
 - e. Slightly agree
 - f. Agree
 - g. Strongly agree
6. Long amounts of time can go by before I feel grateful to something or someone

- a. Strongly disagree
- b. Disagree
- c. Slightly disagree
- d. Neutral
- e. Slightly agree
- f. Agree
- g. Strongly agree

Brief Resilience Scale

Respond to the statement below by selecting one answer that best describes you.

1. I tend to bounce back quickly after hard times.
 - a. Strongly disagree
 - b. Disagree
 - c. Neutral
 - d. Agree
 - e. Strongly Agree
2. I have a hard time making it through stressful events.
 - a. Strongly disagree
 - b. Disagree
 - c. Neutral
 - d. Agree
 - e. Strongly Agree
3. It does not take me long to recover from a stressful event.
 - a. Strongly disagree
 - b. Disagree
 - c. Neutral
 - d. Agree
 - e. Strongly Agree
4. It is hard for me to snap back when something bad happens.
 - a. Strongly disagree
 - b. Disagree
 - c. Neutral
 - d. Agree
 - e. Strongly Agree
5. I usually come through difficult times with little trouble.
 - a. Strongly disagree
 - b. Disagree
 - c. Neutral
 - d. Agree

- e. Strongly Agree
6. I tend to take a long time to get over setbacks in my life.
- a. Strongly disagree
 - b. Disagree
 - c. Neutral
 - d. Agree
 - e. Strongly Agree

Bergen Burnout Inventory (BBI)

Please choose the alternative that best describes your situation (estimation from a previous month).

1. I am snowed under with work.
 - a. Completely disagree
 - b. Disagree
 - c. Neutral
 - d. Agree
 - e. Completely Agree
2. I feel dispirited at work and I think of leaving my job.
 - a. Completely disagree
 - b. Disagree
 - c. Neutral
 - d. Agree
 - e. Completely Agree
3. I often sleep poorly because of the circumstances at work.
 - a. Completely disagree
 - b. Disagree
 - c. Neutral
 - d. Agree
 - e. Completely Agree
4. I frequently question the value of my work.
 - a. Completely disagree
 - b. Disagree
 - c. Neutral
 - d. Agree
 - e. Completely Agree
5. I feel that I have gradually less to give.
 - a. Completely disagree

- b. Disagree
 - c. Neutral
 - d. Agree
 - e. Completely Agree
6. My expectations to my job and to my performance have been reduced.
- a. Completely disagree
 - b. Disagree
 - c. Neutral
 - d. Agree
 - e. Completely Agree
7. I constantly have bad conscience because my work forces me to neglect my close friends and relatives.
- a. Completely disagree
 - b. Disagree
 - c. Neutral
 - d. Agree
 - e. Completely Agree
8. I feel that I am gradually losing interest in my customers or my other employees.
- a. Completely disagree
 - b. Disagree
 - c. Neutral
 - d. Agree
 - e. Completely Agree
9. Honestly, I felt more appreciated at work before.
- a. Completely disagree
 - b. Disagree
 - c. Neutral
 - d. Agree
 - e. Completely Agree

Thank you for your participation! Your time is precious and I am so grateful you made the time to participate. If you would like to inquire about the results of survey, my contact information is below.

"Mindy" Melinda Simpson RN BSN
828-817-6217
msimpson1@gardner-webb.edu
mindybridgy05@yahoo.com

Appendix D

Perceived Stress Scale and Permission

	0 = Never	1 = Almost Never	2 = Sometimes	3 = Fairly Often	4 = Very Often
1. In the last month, how often have you been upset because of something that happened unexpectedly?	0	1	2	3	4
2. In the last month, how often have you felt that you were unable to control the important things in your life?	0	1	2	3	4
3. In the last month, how often have you felt nervous and "stressed"?	0	1	2	3	4
4. In the last month, how often have you felt confident about your ability to handle your personal problems?	0	1	2	3	4
5. In the last month, how often have you felt that things were going your way?	0	1	2	3	4
6. In the last month, how often have you found that you could not cope with all the things that you had to do?	0	1	2	3	4
7. In the last month, how often have you been able to control irritations in your life?	0	1	2	3	4
8. In the last month, how often have you felt that you were on top of things? ..	0	1	2	3	4
9. In the last month, how often have you been angered because of things that were outside of your control?	0	1	2	3	4
10. In the last month, how often have you felt difficulties were piling up so high that you could not overcome them?	0	1	2	3	4

Cohen, S. and Williamson, G. (1988). Perceived Stress in a Probability Sample of the United States. Spacapan, S. and Oskamp, S. (Eds.) *The Social Psychology of Health*. Newbury Park, CA: Sage. Retrieved from <http://www.mindgarden.com/documents/PerceivedStressScale.pdf>

Perceived Stress Scale Permission

PERMISSION FOR USE OF THE PERCEIVED STRESS SCALE

I apologize for this automated reply. Thank you for your interest in our work.

PERMISSION FOR USE BY STUDENTS AND NONPROFIT ORGANIZATIONS: If you are a student, a teacher, or are otherwise using the Perceived Stress Scale (PSS) without making a profit on its use, you have my permission to use the PSS in your work. Note that this is the only approval letter you will get. I will not be sending a follow-up letter or email specifically authorizing you (by name) to use the scale.

PERMISSION "FOR PROFIT" USE: If you wish to use the PSS for a purpose other than teaching or not for profit research, or you plan on charging clients for use of the scale, you will need to see the next page: "Instructions for permission for profit related use of the Perceived Stress Scale".

QUESTIONS ABOUT THE SCALE: Information concerning the PSS can be found at <https://www.cmu.edu/dietrich/psychology/stress-immunity-disease-lab/index.html> (click on scales on the front page). Questions about reliability, validity, norms, and other aspects of psychometric properties can be answered there. The website also contains information about administration and scoring procedures for the scales. Please do not ask for a manual. There is no manual. Read the articles on the website for the information that you need.

TRANSLATIONS: The website (see URL above) also includes copies of translations of the PSS into multiple languages. These translations were done *by other investigators*, not by our lab, and we take no responsibility for their psychometric properties. If you translate the scale and would like to have the translation posted on our website, please send us a copy of the scale with information regarding its validation, and references to relevant publications. If resources are available to us, we will do our best to post it so others may access it.

Good luck with your work.



Sheldon Cohen
Robert E. Doherty University Professor of Psychology
Department of Psychology
Baker Hall 335-D
Carnegie Mellon University
Pittsburgh, PA 15213

Appendix E

Gratitude Questionnaire-Six Item Form and Permission

The Gratitude Questionnaire-Six Item Form (GQ-6)

Using the scale below as a guide, write a number beside each statement to indicate how much you agree with it.

- 1 = strongly disagree**
- 2 = disagree**
- 3 = slightly disagree**
- 4 = neutral**
- 5 = slightly agree**
- 6 = agree**
- 7 = strongly agree**

- ___ 1. I have so much in life to be thankful for.
- ___ 2. If I had to list everything that I felt grateful for, it would be a very long list.
- ___ 3. When I look at the world, I don't see much to be grateful for.*
- ___ 4. I am grateful to a wide variety of people.
- ___ 5. As I get older I find myself more able to appreciate the people, events, and situations that have been part of my life history.
- ___ 6. Long amounts of time can go by before I feel grateful to something or someone.*

*Items 3 and 6 are reverse-scored.

McCullough, M. E. (2013). The Gratitude Questionnaire (GQ-6). *Measurement Instrument Database for the Social Science*. Retrieved from <http://www.midss.org/sites/default/files/gq-6.pdf>

Location:

McCullough, M. E., Emmons, R. A., & Tsang, J. (2002). The grateful disposition: A conceptual and empirical topography. *Journal of Personality and Social Psychology*, 82, 112-127.

The scale was published in a scientific journal for use in the public domain. You do not need to contact any of the authors for permission to use these scales in non-commercial research. You may not use the scales for commercial purposes without permission.

Appendix F

Brief Resilience Scale and Permission

Respond to each statement below by circling <u>one</u> answer per row.		Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
BRS 1	I tend to bounce back quickly after hard times.	1	2	3	4	5
BRS 2	I have a hard time making it through stressful events.	5	4	3	2	1
BRS 3	It does not take me long to recover from a stressful event.	1	2	3	4	5
BRS 4	It is hard for me to snap back when something bad happens.	5	4	3	2	1
BRS 5	I usually come through difficult times with little trouble.	1	2	3	4	5
BRS 6	I tend to take a long time to get over setbacks in my life.	5	4	3	2	1

Scoring: Add the value (1-5) of your responses for all six items, creating a range from 6-30. Divide the sum by the total number of questions answered (6) for your final score.

Total score: _____ / 6

My score: _____ (average)

Smith, B. W., Dalen, J., Wiggins, K., Tooley, E., Christopher, P., & Bernard, J. The brief resilience scale: Assessing the ability to bounce back. *International Journal of Behavioral Medicine* 15(3): 194-200. Retrieved from <https://link-springer-com.ezproxy.gardner-webb.edu/content/pdf/10.1080%2F10705500802222972.pdf>

From: Bruce Smith <bws0513@gmail.com>
Sent: Thursday, February 6, 2020 6:43 PM
To: Mindy Simpson <msimpson1@gardner-webb.edu>
Subject: Re: BRS permission to use

CAUTION: This email originated from outside of the Gardner-Webb.edu domain. Do not click links or open attachments unless you verify that the links and/or attachments are safe.

Hi Mindy,

Thanks for your interest in the Brief Resilience Scale. You are welcome to use it free of charge and for as much as you like.

I have attached (1) our original validation article, (2) a file with the instructions, items, scoring, and suggested cut-offs for high and low resilience, (3) an article on the relationship between the BRS and various outcomes, (4) an article showing how the BRS can be adapted for specific stressors, and (5) an article on the validated Spanish translation of the BRS. As far as we know, there are also many other translations of the BRS including German, Dutch, Italian, Chinese, Japanese, Turkish, Finnish, Croatian, and Serbian translations.

In addition, there is also now a large number of articles reporting results when examining the BRS as a predictor, outcome, and/or mediator of other variables, intervention studies showing that it often increases during interventions, and also how much of the BRS scores may be accounted for by genetics (10% or so). You can generally find these articles by searching google scholar using the key words "brief resilience scale bruce smith."

Please let me know what you learn from using the scale if you can. I wish you the best in your work!

Warm Regards,

Bruce

Appendix G

Bergen Burnout Inventory and Permission

Please choose the alternative that best describes your situation (estimation from previous month)

Completely disagree 1	Disagree 2	Partly disagree 3	Partly agree 4	Agree 5	Completely agree 6
1. I am snowed under with work. (EXH)					
2. I feel dispirited at work and I think of leaving my job. (CYN)					
3. I often sleep poorly because of the circumstances at work. (EXH)					
4. I frequently question the value of my work. (INAD)					
5. I feel that I have gradually less to give. (CYN)					
6. My expectations to my job and to my performance have reduced. (INAD)					
7. I constantly have bad conscience because my work forces me to neglect my close friends and relatives. (EXH)					
8. I feel that I am gradually losing interest in my customers or my other employees. (CYN)					
9. Honestly I felt more appreciated at work before. (INAD)					

EXH exhaustion, CYN cynicism, INAD inadequacy

Salmela-aaro, K., Rantanen, J., Hyvonen, K., Tilleman, K., & Feldt, T. (2011). Bergen Burnout Inventory: Reliability and validity among Finnish and Estonian managers. *International Archives of Occupational and Environmental Health* 84(6): 635-645. doi: 10.1007/s00420-010-0594-3



Feldt, Taru <taru.feldt@jyu.fi>

Mon 2/10/2020 2:26 PM

Mindy Simpson



CAUTION: This email originated from outside of the Gardner-Webb.edu domain. Do not click links or open attachments unless you verify that the links and/or attachments are safe.

Desr Mindy

Yes, you can use the BBI 9 in your thesis. The items of the scale are seen in the Appendix of the study by Salmela-Aro et al 2011.

Best,

Taru Feldt

Hanki [Outlook for Android](#)

